RM 7459

Draft

U.S. ENVIRONMENTAL PROTECTION

COMMENTS ON THE NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP) GRUMMAN-BETHPAGE FEASIBILITY STUDY

1. Comment: Interim vs. Final Action for Site - The Draft FS appears to present a unified, comprehensive remedial strategy for all of the contamination attributable to the NWIRP. EPA does not want to slow any actions to be taken by the Navy, but cannot necessarily consider the proposed actions as the "final" actions for the site, for the following reasons. This probably should not be addressed in the FS, but rather in the proposed plan and ROD.

   Response: The Navy concurs that the selection of remedy should be deferred to the PRAP and ROD. As a result, the remedy recommendation will be deleted from the FS.

1a. Comment: Please note that the Hazardous and Solid Waste Amendments to RCRA define the Grumman/NWIRP properties as one facility, with corrective action required for the entire facility. In addition, according to CERCLA, the definition of site includes any area off of a property where contamination has become located. The Navy's investigation has only looked at Navy property. Maps delineating the extent of soil contamination at the NWIRP terminate at the fence line suggesting that contamination is limited to the fenced-in areas of the site. While the Navy and Grumman may have an arrangement relating to responsibility for cleanup, EPA cannot consider the site as defined by CERCLA or the facility as defined by RCRA to be addressed by the proposed actions. Further, EPA needs to ensure that actions taken at the Grumman property and the NWIRP property are consistent. Thus, the FS must indicate how soil contamination beyond the fence lines is to be addressed and through what mechanisms.

   Response: The Navy's planned approach for this site is to consider the Grumman/Navy property as one site for addressing groundwater and as two separate sites for addressing

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soils. This approach is expected to result in an efficient, protective, and cost effective method of addressing contamination. Specific responses to this comment are presented below.

The FS limits of soil contamination are not based on arbitrary boundaries (fence lines) as suggested by this comment but rather are based on knowledge of the processes generating the waste, the physical constraints of the adjacent areas, and analytical testing. As a result, with the possible exception of areas east of Site 1 and Site 2, there is no basis to believe that soil contamination may be present beyond the fence line. Specific areas are addressed as follows.

Site 1: Contamination at this site is believed to have resulted from either direct application or spillage of chemicals onto the soils or by discharge of chemicals through the septic system. As a result, any migration of contaminates to soils beyond this area can only be through dust migration. Site 1 also features a wind-row running north/south. This wind-row provides a natural barrier to contaminant migration to the east.

The area north of the shaded part of Site 1 is elevated (approximately 3 to 5 feet) above the shaded part and no known disposal activities have occurred in this area. The area west of the shaded part is covered with concrete and further west is Plant No. 3. The area to the south of Site 1 is covered by asphalt or warehouses. The area immediately east of Site 1 is an asphalt roadway. Beyond this area are residential houses. The Navy is currently planning to conduct a sampling program for PCBs in this residential area.

Site 2: Contamination at this site is believed to have resulted from either direct application or spillage of chemicals onto the soils. Also, minor fill activities may have occurred in this area. As a result, any migration of contaminates to soils beyond this area can only be through dust migration. Soils in the area north of Site 2 were tested and found to be essentially clean. This area is also Grumman property. Also, there were no known disposal activities this area. The area west of Site 2 is Site 3. The area to the south of Site 2 is an asphalt roadway. Further south is the previously discussed area

north of Site 1. The area immediately east of Site 2 is Grumman property. Grumman is conducting their own investigation for soil contamination.

Site 3: Contamination in this area is believed to have resulted from either direct application or spillage of chemicals onto the soils. As a result, any migration of contaminates to soils beyond this area can only be through dust migration. The area north of Site 3 is identical to the area north of Site 2, which was found to be essentially clean. This area is also Grumman property. Also, there were no known disposal activities occurred in this area. The area west of Site 3 is covered with asphalt and by warehouses. The area to the south of the shaded part of Site 3 is an asphalt-covered parking lot. Further south of the parking lot is an asphalt roadway, a relatively narrow stretch of soil cover, and finally Plant No. 3.

1.b Comment: It was EPA's understanding in several conference calls and meetings with the NYSDEC that each of the sites in the area (Grumman, Navy and Hooker/Ruco) would address the contamination on the respective properties through source control measures, and then address the downgradient groundwater contamination through cooperative and unified efforts of all parties. The Navy's "preferred alternative" for groundwater is not consistent with EPA and NYSDEC's agreed approach to addressing groundwater contamination at their respective sites. If the Navy wishes to pursue "offsite", downgradient remedial actions for groundwater the EPA would not object. However, any action the Navy may take in that respect shall not exempt them from potential future remedial measures that may result pursuant to the EPA and NYSDEC's combined groundwater RI/FS activities.

Response: The Navy understands EPA's and NYSDEC's concerns regarding offsite downgradient groundwater contamination and agrees that a cooperative and unified effort is required by the Navy, Grumman and Hooker/Ruco.

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The Navy disagrees that the preferred alternative is not consistent with this approach. It is the Navy's position that the preferred alternative addresses on-site source control and a reasonable portion of the required overall offsite remedial action.

But the Navy needs to be aware that it may also be responsible for some off-site work in the future.

The preferred alternative was not intended to be the overall remedy for offsite issues; the Navy expects that Grumman would continue to contribute to offsite remedial actions and that Hooker/Ruco would also assume some responsibility and contribute to same.

As the Navy sees it, there are three approaches that can be used to arrive at a solution for the overall (Navy, Grumman, RUCO) site. The easiest for the Navy is for each party to propose a plan that would address both offsite and onsite concerns (this is what we attempted). With coordination and negotiations between all parties, it would be possible to arrive at a solution where each of the parties offsite actions, when combined, would satisfy offsite concerns.

The second alternative which the Navy can also do but does not prefer is to have each party address onsite concerns only (onsite ROD) and then at some later time discuss offsite issues, have an offsite ROD then perform offsite remedial actions. The Navy does not prefer this second alternative because it is likely to be a time consuming process. It is the Navy's position that we (PRPs, NYSDEC, EPA etc) are all familiar with the issues at this time and having a separate offsite ROD would be essentially "postponing" some decisions that need to be made now.

The third alternative is to have one party, be it the Navy, Grumman or Hooker/RUCO address what they believe to be their portion of offsite concerns, only to be required to do additional work at some later time. While this scenario can never be ruled out, it can be minimized and is obviously undesirable.

The Navy is willing to take whatever actions are deemed appropriate at this time. As stated, the first alternative is preferred because it is expeditious.

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2. Remedial Action Objectives

2.a Comment: The Navy has proposed remedial action objectives and goals in Section 2 of the FS. However, the preferred alternative does not fully meet the goals and objectives. The Navy proposes to actively treat the most contaminated soil and groundwater, but does not explain how the residual contaminants will be managed. The proposed groundwater cleanup level of 100 ppb will not ensure that the cleanup standards are met. If the Navy is going to rely on natural attenuation and capture by the Bethpage Water District wells it must provide some analysis of when the groundwater under the site will attain the remedial action goals. Further, the Navy proposes that the soil contaminants will be addressed by a combination of treatment and containment. But, the Navy has not assessed the impact to groundwater from leaving volatiles in soil at the proposed level.

Response: The analysis requested for compliance with groundwater objectives and goals is provided in Appendix D of the FS and discussed in Section 4.0 for each alternative. As discussed, residual soil contamination would be addressed through a soil cover and deed restrictions for Alternatives S2, S3, and S4. Please note that for groundwater alternatives, which target the 100 ug/l level, cleanup is not dependent on capture by the BWD wells, rather natural attenuation of the contaminants is expected to occur during the 30 year cleanup time. In addition, the 100 ug/l level defines the area to be addressed. At the completion of groundwater remediation, all (or most) areas are expected to be at or below MCLs.

Calculations will be provided which assess the impact of residual VOCs to groundwater at the proposed level. Based on a projected 30 year cleanup requirement for groundwater, it is likely that residual VOCs in soils would also be below the remediation goals. Natural flushing of these soils would be encouraged through the use of a permeable cap.

2.b Comment: Any proposed soil remedy for this site should be able to provide adequate protection to the groundwater to prevent further groundwater contamination. This is an

essential step in providing source control measures for the contaminated soils and groundwater at the Site. It is not clear whether the proposed soil remedial action goals have fully addressed this concern. At other sites NYSDEC TAGM levels have been used to establish the soil standards.

Response: The proposed soil action levels are generally more stringent than the NYSDEC TAGM for protecting groundwater. These actions levels are based on site specific data which indicates that the NYSDEC TAGM values for VOCs would not be protective of groundwater. Alternatives S4, S5, S6, and S7 specifically address VOC leaching from soils and contaminating groundwater. Alternatives S5, S6, and S7 also target cleanup of soils to TAGM levels, however, none of these are likely to be selected based on cost.

3. Characterization of the Site.

3.a Comment: Review of the Navy's Phase I and II RI Reports and Draft FS, does not reveal the results of any sampling and analysis for Tentatively Identified Compounds (TICs). It has been EPA's experience that NYSDEC considers TIC sampling and analysis to be essential at other sites prior to the ROD. The Navy should discuss this issue as it relates to full site characterization.

Response: Full TIC data is provided in the Phase 1 and 2 RI Reports. A review of Phase 1 RI TIC data indicated the need for additional PCB testing. This testing was conducted during the Phase 2 RI. Beyond these PCB TICs, an initial screening of this data for other TICs did not reveal any significant concerns. NYSDEC concurred with this evaluation.

3.b Comment: It appears that the soils in and below the recharge basins (sumps) are not being addressed as part of a remedial action at the NWIRP. These recharge basins have been documented to have received wastes from production processes at the NWIRP and, as the RI indicates, are likely sources of groundwater contamination. Despite this fact, these sumps have not been targeted for remediation. Even if Grumman has routinely

removed sediment from the recharge basins, underlying soils may present a continued source of groundwater contamination and, must therefore be addressed.

Response: Based on sediment and groundwater testing conducted during the Phase 1 and 2 RIs, there is no evidence that underlying soils at the recharge basins act as a continued source of groundwater contamination. Groundwater in monitoring wells located around the basins contain less solvent than that measured in the recharge basin water. Also, the operation of these basins are significantly different than the operation of the sumps at the Hooker/RUCO Site. For approximately the past two decades, large quantities of relatively clean (non process) water have been flushed through the basin. Note that NYSDEC concurs with this opinion. (see attached letter dated 12/13/93).

3.c Comment: The Navy's RI and FS Reports mention the potential presence of DNAPL in the groundwater beneath the facility, however, none of the groundwater measures presented in the preferred alternative include actions to deal with DNAPL. If DNAPL are present at this site, specific and separate measures may be required to address the problem. DNAPL in groundwater generally do not respond to standard pump and treat methods. DNAPL may move independent of groundwater flow making them difficult to locate and remediate. The DNAPL issue needs to be addressed further in the FS.

Response: As discussed in Phase 2 Work Plan and Phase 1 RI report, DNAPL was considered to be potentially present in the HN-24 area. The basis for this consideration was that during the installation of a Phase 1 RI monitoring well, an elevated HNu split spoon head space result was obtained from a sample collected in a clay layer. Also, the groundwater in this well at the depth of the clay layer had a corresponding high concentration of TCE. Specific testing of the clay layer was conducted during the Phase 2 RI activities to investigate the possibility that DNAPL was present. No evidence of DNAPL was found during this testing. In addition, the concentration of TCE in HN-24I was found to be present at a significantly lower concentration during the Phase 2 RI than during the Phase 1 RI. As a general rule-of-thumb, DNAPLs should be considered potentially present when groundwater concentrations are measured to be within 10% of

the solubility of a chemical in water. The solubility of TCE in water is 1,100 mg/l. TCE was measured to be present at a concentration of 58 mg/l during the Phase 1 RI. During the Phase 2 RI, the TCE concentration in this well was measured to be 9 mg/l. As a result of all information available, there is no current reason to believe that DNAPLs are present at the facility.

4. Comment: The FS should not be too specific about design details that may need to be modified. If details are presented appropriate caveats should be included such as "the following system is believed to meet the performance standards".

Response: The Navy agrees. Qualifier statements will be added to various write ups and figures in the report to indicate the preliminary nature of the design.

5. Comment: The Navy's preferred alternative calls for the use of deed restrictions to limit future use of the site. At other sites EPA and NYSDEC have not favored deed restrictions because of the difficulties in controlling future development and enforcing institutional controls. The FS should provide additional discussion as to why deed restrictions are more feasible on Federally owned property and on the Navy's obligations under CERFA should the land change ownership.

Response: The use of deed restrictions is not considered to be more feasible on Federally owned property than at CERCLA sites. However, they can be more readily applied in this case since the Navy owns the property it would be a voluntary action by the Navy. Also, they are considered necessary to prevent unrestricted use of the site. The absence of deed restrictions implies that no contamination remains on site. This would be the case under Alternatives S5-S7. However, as indicated in other comments, the Navy is not considering these alternatives because of the enormous cost.

As for future use of the site, if Grumman no longer needs this land, and decides to move off, the Navy will still retain ownership and could use this land for other uses while keeping the deed restrictions in place. In the event that there are no other federal

agencies interested, the land could be offered to the general public. At this time, the Navy along with local planning boards would have to sit down and discuss which land use options are available and the feasibility/need of cleaning up the site to accommodate a respective use.

6. Comment: EPA does not believe that sufficient information is presented in the FS to properly evaluate the groundwater alternatives the Navy is presenting. More information, particularly regarding capture zones of proposed pumping wells, needs to be included in the FS. EPA is not confident that the Navy's proposal will effectively prevent further downgradient migration of contaminated groundwater from leaving its facility.

Response: Extensive capture zone analysis is provided in Appendix D of the FS. Specifically, the layer-specific Figures 3-8 through 3-13 and Figures 4-31 through 4-55 indicate that contamination from Site 1 and HN-24 area would be effectively captured by the extraction system. Please note that as indicated in Comment 4 above, data presented in the FS is intended to be preliminary.

Also, the Navy and Grumman properties are being considered as one facility for groundwater. This issue may need to be discussed further. Specifically, if the Navy and Grumman are to be considered as one facility, then any contamination which may be leaving the Navy's property will probably be addressed by Grumman's remediation efforts and should not be considered a problem by the EPA.

This issue will be discussed as part of the PRAP and ROD and will not be addressed in this FS.

7. Comment: Some additional characterization of the soil may be necessary during design or remedy construction to more accurately delineate the extent of contamination.

Response: The Navy agrees. As discussed during TRC meeting No. 5, statements will be added throughout the FS indicating the need for RD/RA testing.

B. SPECIFIC COMMENTS

1. Comment: Executive Summary, pg. ES-3 - EPA generally prefers that the FS not include any statements indicating the recommended or preferred alternative. The proposed plan is generally the document that indicates the preferred alternative.

   Response: The preferred alternative will be deleted from the FS.

2a. Comment: Section 1.4.3. Pg. 1-7, ¶ 7 - Please note that the recharge basins (sumps) at the Hooker/Ruco site are not currently used for industrial purposes. Sump 3 at the Hooker/Ruco site is used for storm water recharge while sump 4 is used for boiler blow down only. None of the existing recharge basins have been used for the discharge of process wastewaters since the 1970's. Please revise this paragraph of the FS to address this comment.

   Response: The term "industrial" will be deleted from this page. Please note that Grumman and the Navy basins are currently only used for noncontact cooling water and storm water infiltration.

2b. Comment: Pg. 1-8, ¶ 2 - It is unlikely that the recharge basins at the Hooker/Ruco site are responsible for creating a mounding effect in the groundwater due to the low volume of water these sumps receive.

   Response: A groundwater mounding has been observed around this area, whether it results from recharge or geology, it is uncertain. The following will be added after this sentence. "Alternatively, local geological formations may also result in this mounding.

3. Comment: Section 1.5.3, Pg. 1-11, ¶ 2 - The FS does not present sufficient information to make the statement that "...all contaminated groundwater from Site 1 would be captured by Grumman Production wells to the south." The extent of the groundwater contamination beneath the NWIRP has not been fully delineated, nor can the

groundwater contamination from Site 1 be distinguished from the groundwater contamination in other areas of the facility. The FS only presents the results of some particle tracking modeling efforts. The capture zones or the effective depths of Grumman's pumping wells are not presented. The particle tracking has only presented paths from an aerial perspective and not in a vertical depth perspective. The possibility exists that contaminant particle paths may flow beneath the effective pumping zones created by the Grumman wells.

The statement made in this paragraph also relies on the current pumping conditions of the Grumman wells. These wells are documented to have varied in their pumping rates seasonally and over time. Thus, any claims made based on the result of modeling using current pumping conditions, should be qualified accordingly.

Response: Section 1.6.3 is a summary of the RI report which presents extensive documentation that all contamination from Site 1 should be captured by Grumman production wells to the south under both current and historic pumping conditions. The only situation in which Site 1 contaminated groundwater would not be captured is under the "No pumping condition", which is neither a current nor historic condition under Grummans operation.

The Navy believes that the extent of groundwater contamination has been adequately delineated to allow cleanup to proceed. Full delineation, if possible, would require extensive additional study and associated investigation cost. Soluble contamination from Site 1 and Site 2 should be adequately tracked through computer modeling.

Also, there is no current evidence of DNAPL. DNAPL if present historically would be expected to end at one of two clay layers observed in the upper 100 feet of the aquifer. If DNAPL was present at these locations, then soil testing during monitoring well installation as well as monitoring well results from these depths should provide some indication of it. Evidence of potential DNAPL could include significantly higher concentrations of the solvent near or at a confining (clay) layer and/or the concentration

of solvent in groundwater being high relative to its solubility (greater than 10% of the solubility in water). Neither of these conditions occur at Site 1. The maximum solvent concentrations appear in the upper 10 feet of the water table, and at depths of 50 to 150 feet below this point, the solvent concentrations are 2 to 3 orders of magnitude lower.

The Navy disagrees with the EPA's statement that the particle tracks were investigated aerially only. The particle tracks presented are three dimensional and are equivalent to capture zones in many circumstances and in this case, because of the significant depth of groundwater, the particle tracking efforts are better than simple capture zone analysis.

Based on the computer modeling results, there is no indication that contaminants would flow underneath these wells (See Phase 2 RI, Appendix F, Figures 8-2, 8-5, and 8-8). The downward migration of contaminants at the site has been adequately linked to the operation of the production wells. As a result, contamination at depths below these wells would not be expected, (i.e. there is no mechanism for the contaminants to sink to that level).

4. Comment: Section 1.6.2 - See General Comment 3.b pertaining to the sampling of soils beneath the recharge basins.

Response: As responded to under Comment 2, based on sediment and groundwater testing conducted during the Phase 1 and 2 RIs, there is no evidence that underlying soils at the recharge basins act as a continued source of groundwater contamination. Groundwater in monitoring wells located around the basins contain less solvent than that measured in the recharge basin water. Note that NYSDEC concurs with this opinion, (see attached letter dated 12/13/93).

Section 1.6.2, and other similar sections, is only intended to briefly describe the results of the Phase 1 and 2 investigations. The intent of the FS is not to discuss potential data gaps which may have resulted from previous investigations. This comment should have

been brought to the Navy's attention during the Comment periods for the Phase 1 and 2 RI Reports.

However, the Navy does not agree with the EPA's position on this issue based on findings gathered during Phase 1 and 2 RI activities. Please refer to the response to EPA's characterization of the site, Comment 3b for further explanation.

5. Comment: Section 2.2.1, pg. 2-2, ¶ 1 - The conclusion that the recharge basins pose negligible risk is not supported. The conditions of any SPDES permits and their relation to the remedial activities at the NWIRP should be presented in order to properly evaluate the effectiveness of the overall remedial strategy to be employed at the site. All conditions and cleanup goals required by the SPDES permit should be presented.

Response: It is the Navy's understanding that the state of New York, through the SPDES program, is responsible for confirming that the recharge basins do not present a risk. In general, the SPDES standards are identical to NYS Drinking Water Criteria. Any other issues regarding the operation of the recharge basins should be addressed to the operator of the facility. Also, see the NYSDEC response to comment A.3.b.

6. Comment: Table 2-1 - Footnote (d) is incorrect. The risks were recalculated as a result of the Phase 2 RI.

Response: The footnote is correct. The risks resulting from potential PCB contamination of the groundwater and subsequent use of contaminated were not recalculated during the Phase 2 RI. Potential risks resulting from PCBs leaching to groundwater were not estimated because: (1) PCBs have a very low solubility in water; (2) PCBs have a high absorbance to soils; and (3) PCBs were not detected in any groundwater samples.

7. Comment: Table 2-9 - See General Comment 2 concerning the use of NYSDEC's TAGM.

Response: As responded to under the response to comment 2, the proposed soil action levels are generally more stringent than the NYSDEC TAGM for protecting groundwater. These actions levels are based on site specific data which indicates that the NYSDEC TAGM values for VOCs would not be protective of groundwater. Alternatives S4, S5, S6, and S7 specifically address VOC leaching from soils and contaminating groundwater. Alternatives S5, S6, and S7 also target cleanup of soils to TAGM levels, none of which are likely to be selected based on cost.

8. Comment: Table 2-11 - The New York State Groundwater Effluent Standards presented in this Table appear to contradict information supplied to the EPA by NYSDEC for similar discharges at the Hooker/Ruco site. NYSDEC has indicated to EPA that the NYSDOH Drinking Water Standards were applicable to discharges that would impact the sole source aquifer. These standards have been applied at the Hooker/Ruco site as ARARs for discharge of treated water. The presentation of the effluent standards in the Navy's FS appears to contradict NYSDEC's policies on discharges to a sole source aquifer. If the NYSDOH standards are not employed, the discrepancy in NYSDEC policy would require further explanation.

Response: As clarified by the NYSDEC letter dated December 13, 1993, the NYSDOH drinking water standards apply to the effluent in this case.

9. Comment: Table 2-12 - The remedial action goals for soil are not clear from this table. Is it the lowest among the risk based, ARAR based or TBC based? Since this table is establishing the cleanup standards for soil, the standard to be used must be clear. Further, the footnotes for the ARAR based and TBC based remediation goals are not clear. This table shall clearly reference all sources including titles of all documents from which information was obtained.

Response: Because of the complexity of the site, a range of remediation goals have been developed and presented in this table. The range becomes especially significant when compliance with ARARs, risk guidance, and TBCs are considered independently.

For example, some alternatives are developed to comply with only ARARs, other alternatives comply with ARARs and risk guidance, whereas other comply with all three. Once a remedial scheme has been developed, based on the nine criteria, then PRGs can be presented in the PRAP and ROD. A complete development of this table is provided in Appendices A and B.

10. Comment: Figures 2-1 through 2-6 - These figures indicate that the extent of soil contamination terminates at the fence lines. As discussed in #1a of the General Comments, the FS must indicate how soil contamination beyond the fence lines is to be addressed and through what mechanisms.

Response: As previously discussed, it is not believed that there is any contamination beyond areas indicated. However, the Navy is currently planning to conduct sampling in the residential area to the east to confirm this opinion. Please note that the Navy will handle this as a separate issue independent of this FS. If instituted, the timing will be either before or shortly after the public meeting.

11. Comment: Figure 2-7 - The estimated extent of groundwater contamination portrayed on this figure has unlikely boundaries given the data that is available.

Response: The Navy only partially agrees. It is acknowledged that boundaries are relatively rough with some margin of error. However, the boundaries to the north, east, and west, and southwest are based on computer modeling results and have been confirmed through groundwater testing. The onsite/near site boundary to the south is on Grumman property. This boundary is based on Grumman monitoring wells that indicate the groundwater in the upper 250 feet is not significantly contaminated beyond this area. Additionally, Grumman is investigating contamination beyond this area.

12. Comment: Section 3.3.3, page 3-5 - Clay capping as a containment response action would preclude future residential use and would require land use restrictions. Therefore, alternative S2B would not be suitable for future residential use.

Response: The Navy agrees that clay capping normally precludes future residential use and it likely that this alternative would not be considered if the residential use scenario was targeted. Also, the Navy to date has no reason to believe that "residential" use is a realistic future land use scenario and will therefore be pursuing other "industrial" use cleanup options. Please refer to the response to EPA comment No. 5 for further explanation.

13. Comment: Sections 3.3.5 and 3.3.6 (Alternatives S4A and S4B) - Other alternatives described in this report use "A" and "B" to differentiate between projected land use. Please renumber these as two separate alternatives in accordance with projected land use.

Response: The alternatives will be renumbered as requested.

14. Comment: Page 3-11, ¶ 4 - The Navy is proposing "modified action levels" as part of its preferred alternative. In addition to concerns raised above regarding the soil trigger levels, the proposal for three times the VOC action levels is not supported. Does the Navy consider this the "principal threat" as discussed in the NCP. Is the modified action level correlated in any way with the performance capabilities of the in-situ vapor extraction system. Or is there another basis for this proposal?

Response: The Navy may consider the modified VOC action level as well as the groundwater with VOC concentrations greater than 100 ug/l to be principal threats during the preparation of the PRAP and ROD. The primary basis for three times the soil action level and the 100 ug/l criteria for groundwater is cost effectiveness. At lower action levels, costs increase significantly, however, the additional environmental benefit is marginal. Also, because of the expected long term cleanup required, contaminants in areas not directly being treated are expected to decrease to acceptable levels through natural attenuation. Calculations and model runs supporting this positions are (or will be) provided in the FS.

15a. Comment: Section 3.4.5, Alternative GW4A. One of the stated remedial action objectives is to restore the groundwater to the remedial action goals throughout the plume. If this cannot be achieved, the stated objective is to prevent further off-site migration of contaminants. This proposed alternative (the preferred alternative) will not meet either of these objectives.

Response: With the exception of a small piece of residential neighborhood (where groundwater flows offsite and then back on site) and by considering the NWIRP and Grumman one site, the presented alternative would achieve the containment objective. It is also likely that any extraction system used would target source area treatment. As a result, the quantity of contaminants flowing off site at the small residential neighborhood area could be minimized. However, it is doubtful that full containment would be cost effective at this location or even necessary for the protection of human health.

15b. Comment: This alternative is proposing to use an aeration basin being introduced by Grumman. No discussion is provided regarding the potential for the aeration basin to become a source of groundwater contamination. Also, there is no discussion regarding the permitting requirements to use this "off-site" basin. Some consideration should be given as to whether this aeration basin might constitute a Corrective Action Management Unit (CAMU) under RCRA.

Response: This aeration basin is on the Navy property and it would be operated in accordance with Grumman's SPDES permit. The permit stipulates that water entering the basin be of drinking water quality. Currently, there is no basis to consider this basin a CAMU under RCRA.

16a. Comment: Section 4.2.5, Alternative S4B. See Comment 14 above regarding the modified action levels. Also, will vapor extraction continue until the remedial action goals are attained or until the modified action levels are reached?

Response: The end point for this system has not been determined at this time, but a likely scenario is to operate the system until the residual contamination is in the range of 1 to 3 times the remedial action goals.

16b. Comment: Pg. 4-18, ¶ 1.2 - A more detailed explanation of the proposed use of the "hazardous waste criteria" mentioned in these paragraphs shall be provided. It is not clear from the FS exactly what this "hazardous waste criteria" is or what chemical-specific concentrations are to be achieved. Further discussion of the LDRs as they may apply to disposal in off-site landfills is required.

Response: The term "hazardous waste" is as defined by the USEPA. There is no basis for classifying any of the materials onsite as listed wastes; therefore, only the characteristic waste criteria defined by the USEPA is being considered. To clarify the subject, where the term "hazardous waste criteria" is used in discussion, it will be qualified as follows, "hazardous waste criteria as defined by the USEPA under 40 CFR 261. 24". Compliance with LDR standards are referenced in the "Compliance with ARARs" section of this alternative. Since the materials are being treated to achieve a non-hazardous classification, compliance with LDRs is also achieved for characteristic wastes.

16c. Comment: Prior to selecting either landfill disposal or incineration of PCBs, the Navy should ensure that a TSCA authorized PCB landfill or incinerator would be willing to accept the PCB contaminated soil from the facility. Currently, there are only a handful of TSCA authorized landfills and incinerators. Depending upon the availability of authorized PCB landfills/incinerators, the Navy may be required to store the excavated soil at the NWIRP/Grumman facility pending acceptance at an appropriate PCB landfill or incinerator. This scenario should be accounted for by the Navy, and provisions should be made for safe management of the stored or stockpiled soil. Please note that authorization from EPA or NYSDEC under the CAMU rule may be required for on-site storage of the contaminated soil.

Response: Currently, the material of concern is effectively capped at the site and as a result does not present a risk to human health or the environment. Excavation and offsite treatment/disposal would not occur until handling/disposal arrangements are secured with an offsite facility and proper authorization obtained. Please clarify whether storage of PCB-contaminated non-hazardous material is allowed under the CAMU rule.

I need to get back to them on this.

NYSDEC considers PCBs as hazardous. What is the TSCA viewpoint of CAMUs?

16d. Comment: Appendix E (Cost Estimates) does not take into account the costs pertaining to transporting the PCB-contaminated soil for long distances. These long transports may be necessary if capacity is not available at closer locales.

Response: The estimate includes 1700 miles (one way) for soils to be incinerated and 450 miles (one way) for soils to be landfilled. Target incinerators include those in Texas and Utah. The targeted landfill is in the Buffalo, NY area. Conversations with the landfill indicated that all of the PCB-contaminated soils from this facility can be placed at that site.